

**Before the
FEDERAL COMMUNICATIONS COMMISSION
45 L Street NE
Washington, D.C. 20554**

In the Matter of

Default Transmission of Wideband Audio
to Domestic and International Telephone
Destinations

**PETITION FOR RULEMAKING FOR DEFAULT TRANSMISSION OF WIDEBAND
AUDIO TO DOMESTIC AND INTERNATIONAL TELEPHONE DESTINATIONS**

Petitioner James P. Salsman, CEO and sole principal owner of Speak Clearly, LLC, doing business as PhoneClearly.com, submits this Petition for Rulemaking for Default Transmission of Wideband Audio to Domestic and International Telephone Destinations, and for cause would show this Honorable Commission:

A. PARTIES

1. The Petitioner in this matter is James P. Salsman, a law-abiding adult citizen and a resident of 1910 Mount Vernon Ct., Apt. 3, Mountain View, CA 94040, who prefers to receive communications on this matter by email to jim@phoneclearly.com or by SMS text message to +1-970-616-1934.
2. Petitioner submits this petition to seek orders of specific performance for all mobile telephone carriers within the United States.

B. JURISDICTION AND VENUE

1. Jurisdiction before this Honorable Commission is pursuant to 47 CFR § 1.401.

2. Venue is proper in Washington, D.C., as it is the address of the Commission.

C. STATEMENT OF FACTS

1. Mobile telephone carriers currently operate in a manner in which they are allowed to continue sending narrowband audio to domestic and international telephone destinations.^{1,2}
2. For instance, a user with a wideband (“HD audio,” typically the G.722.2 AMR-WB or similar codec) phone will get very clear reception when calling someone with a similar telephone on their carrier's network. On the other hand, if such a user calls someone on a competitor carrier’s network, the user will be less likely to be able to differentiate between /f/ and /s/ sounds due to low frequency bandpass filtering, because the carriers will almost always fall back to the antiquated narrowband POTS G.711 PCMU mu-law pulse code modulation codec.
3. The current situation has led to a scenario in which competitors receive no benefit from sending or receiving wide bandwidth audio to or from other carriers. This is a *bona fide* market failure, due to a prisoners' dilemma.^{3,4}
4. For consumers to receive any benefit of wideband audio to and from customers of carriers other than their own, mobile carriers should be required to send wideband audio to domestic and international telephone destinations, except under the following

¹ *Reddit.com* (2020) “In 2020, why is cross-carrier HD voice not standard (or why is voice quality to other carriers so bad)?”: https://www.reddit.com/r/tmobile/comments/gillt1/in_2020_why_is_crosscarrier_hd_voice_not_standard/

² Verizon Wireless (2022) “Why can't I make an HD voice call?” In their *HD Voice FAQs*, <https://www.verizon.com/support/hd-voice-faqs/#item7-1> which states, “Either your phone or the phone you're calling isn't connected to the Verizon 4G LTE network at the time of the call.”

³ Washington State University School of Economic Sciences (2017) “Market Failures,” at: <http://ses.wsu.edu/wp-content/uploads/2017/09/market-failure.pdf> (slide 15 of 15.)

⁴ *Investopedia* (2022) “The Prisoner’s Dilemma in Business and the Economy,” At: <https://www.investopedia.com/articles/investing/110513/utilizing-prisoners-dilemma-business-and-economy.asp>

circumstances: (1) in the event that the callee (the person being called) cannot or will not accept wideband audio; and (2) in the event that local mobile transceiver base station bandwidth is limited or congested, for instance, in a packed sports event stadium. Under such circumstances, carriers should be allowed the use of narrowband audio.

D. MOBILE TELEPHONE CARRIERS SHOULD SEND WIDEBAND AUDIO TO ALL TELEPHONE DESTINATIONS

1. Mobile telephone carriers currently operate in a manner in which they are allowed to continue sending narrowband audio to domestic and international telephone destinations. The underlying cause of this specific market failure is spite, defined as to intentionally hurt even when there might be no (apparent) gain, and even when that action might cause the spiteful person harm.^{5,6}
2. Failing to transmit wideband audio deprives ordinary mobile telephone consumers of high quality telephone service, along with the hard of hearing,^{7,8,9,10,11} second language learners,¹² apraxia and related speech disorder patients and the speech language

⁵ *English Wikipedia* (2022) “Spite (sentiment)” at: [https://en.wikipedia.org/wiki/Spite_\(sentiment\)](https://en.wikipedia.org/wiki/Spite_(sentiment))

⁶ Patel, N.V. (2020) “10 Scientific Facts About Spite,” *Mental Floss*: <https://www.mentalfloss.com/article/554980/scientific-facts-about-spite>

⁷ Telecommunications Industry Association (2012) *Petition for Rulemaking in the Matter of Access to Telecommunications Equipment and Services by Persons With Disabilities*, “Improved Access to Emergency Services for Hard-of-Hearing Consumers;” excerpts: “Congress has passed the *Twenty-First Century Communications and Video Accessibility Act of 2010*,⁸ requiring the Commission to create a Federal advisory committee to examine policies and practices for the purpose of achieving equal access to emergency services by individuals with disabilities,⁹ among others. More recently, Congress enacted the *Next Generation 911 Advancement Act of 2012* as a part of the *Middle Class Tax Relief and Job Creation Act of 2012*.¹⁰ While focusing on E911 and next generation improvements for ways to reach emergency services, this law included the significant finding that, ‘ensuring 9-1-1 access for all citizens includes improving access to 9-1-1 systems for the deaf, hard of hearing, deaf-blind, and individuals with speech disabilities.’¹¹” At: <https://www.fcc.gov/ecfs/file/download/7022038784>

⁸ Pub. L. No. 111-260, signed into law on October 8, 2010.

⁹ *Id.* at § 106(a).

¹⁰ *Middle Class Tax Relief and Job Creation Act of 2012*, Pub. L. No. 112-96 (2012), Title VI, Subtitle E.

¹¹ *Id.* at Section 2(5).

¹² O’Brien, M. G., *et al.* (2018) “Directions for the future of technology in pronunciation research and teaching,” *Journal of Second Language Pronunciation*, 4(2), 182-207. Excerpts: p. 186: “pronunciation researchers are primarily interested in improving L2 learners’ intelligibility and comprehensibility, but they have not yet collected

pathologists potentially diagnosing and treating them,¹³ the United States armed forces training commands,¹⁴ and automatic speech recognition applications, including interactive voice response systems.

3. This Honorable Commission has stated that they, “should not intervene in the market except where there is evidence of a market failure and a regulatory solution is available that is likely to improve the net welfare of the consuming public, *i.e.*, does not impose greater costs than the evil it is intended to remedy.”¹⁵ Here there is clear evidence of a market failure, and the proposed regulatory solution will very likely improve the net welfare of the consuming public, because the value of sending and receiving wideband audio is much greater than the costs to mobile carriers, which *e.g.* have built out 4G and 5G capacity to support much higher bandwidth streaming video services and surge usage scenarios.¹⁶ According to the English Wikipedia,¹⁷ the “principal-agent problem”¹⁸ is the form of market failure which most closely resembles the present situation, and it demands a regulatory, legislative, treaty, or other policy response.¹⁹ Other sources call the market

sufficient amounts of representative and reliable data (speech recordings with corresponding annotations and judgments) indicating which errors affect these speech dimensions and which do not.” Page 192: “Collecting data through crowdsourcing...” At: <https://www.jbe-platform.com/content/journals/10.1075/jslp.17001.obr>

¹³ Hair, A., *et al.* (2018). “Apraxia world: A speech therapy game for children with speech sound disorders,” in *Proceedings of the 17th ACM Conference on Interaction Design and Children*, pp. 119-131: <https://psi.engr.tamu.edu/wp-content/uploads/2018/04/hair2018idc.pdf>

¹⁴ U.S. Army Combat Capabilities Development Command Soldier Center (2022) “Addressing Team Process with Automated Speech Act Assessments,” by J.T Folsom-Kovarik, *et al.*, pp. 139-146; and “Leveraging Advances in Natural Language Processing to Support Team Communication Analytics in GIFT,” by R. Spain, *et al.*, pp. 147-156, in *Proceedings of the 10th Annual GIFT Users Symposium* (GIFTSym10), Orlando, Florida: https://gifttutoring.org/attachments/download/4563/GIFTSym10_Proceedings_Final_052722.pdf

¹⁵ 94 FCC 2nd 1019 ¶ 107 (1983).

¹⁶ Deutsche Telekom AG (2022) *Unlimited video streaming with Binge On*, which states, “As a Simple Choice™ customer, you can stream all the video you want while on our network. Data charges do not apply.” At: <https://www.t-mobile.com/offers/binge-on-streaming-video>

¹⁷ *English Wikipedia* (2022) “Market failure” article at: https://en.wikipedia.org/wiki/Market_failure

¹⁸ *English Wikipedia* (2022) “Principal-agent problem” article at: https://en.wikipedia.org/wiki/Principal-agent_problem

¹⁹ *English Wikipedia* (2022) section on “Interpretations and policy examples,” in the “Market failure” article at: https://en.wikipedia.org/wiki/Market_failure#Interpretations_and_policy_examples

failure involved one of mobility of resources, distribution of public goods,²⁰ or allocative inefficiency.²¹

4. Regulation is the only solution to this market failure, because it involves a prisoners' dilemma.^{3,4} *I.e.*, none of the carriers can derive any economic benefit from sending or receiving wideband audio unless more (or all) of them are required to do so.
5. Mobile telephone carriers should send wideband audio by default to domestic and international telephone destinations, except under the following circumstances: (1) in the event that the callee (the person being called) cannot or will not accept wideband audio; and (2) in the event that local mobile transceiver base station bandwidth is limited, for instance, in a packed sports event stadium. Under such circumstances, carriers should be allowed to fall back to the use of narrowband audio. Otherwise, industry standard codec negotiation protocols easily allow upgrading from the current default of narrowband POTS PCMU G.711 mu-law encoded pulse code modulation, to wideband audio.²²

E. PRAYER FOR RELIEF

REASONS WHEREFORE, PREMISES CONSIDERED, Petitioner respectfully requests this Honorable Commission to issue a Rule that mobile carriers shall send wideband audio by default to domestic and international telephone destinations, except under the following circumstances:

²⁰ Mometrix Test Preparation Academy (2022) *Top Examples of Market Failure*, stating: “There are five major elements that, if lacking or weak, can cause a market failure...: competition, information, **mobility of resources**, externalities, and **distribution of public goods**.... If you are a supplier and you have resources, but you can’t get them to the places they need to be, then you’re not going to be making any money off of those resources.... If you don’t provide something the public wants or needs, then you’re not going to have a very good market.” [Emphasis added.] At: <https://www.mometrix.com/academy/market-failure>

²¹ Critic Capital LLC (2022) *Types of market failure*, stating: “Productive and **allocative inefficiency**: Markets may fail to produce and allocate scarce resources in the most efficient way.” [Emphasis added.] At: https://www.economicsonline.co.uk/market_failures/types_of_market_failure.html/

²² Jobson, R. (2022) “Understanding Media in SIP Session Description Protocol (SDP),” *teraquant.com*: <https://teraquant.com/understand-media-sip-session-description-protocol/>

(1) in the event that the callee (the person being called) cannot or will not accept wideband audio; and (2) in the event that local mobile transceiver base station bandwidth is limited, for instance, in a packed sports event stadium. In which cases, carriers shall be allowed to fall back to the use of narrowband audio. And please award Petitioner such equitable and further relief as this Honorable Commission deems fair, proper, and necessary. Thank you, sincerely.

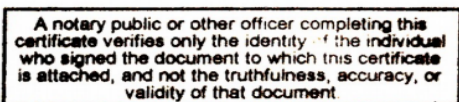
Submitted this 21st day of August, 2022.

Respectfully submitted,

/signed/
James P. Salsman,
Petitioner *pro se*

VERIFICATION

I, James P. Salsman, do swear and affirm under penalty of perjury that I have read the foregoing Petition for Rulemaking for Default Transmission of Wideband Audio to Domestic and International Telephone Destinations, know the contents thereof, and believe them to be true.



/signed/
(Sign in the presence of a Notary Public)

Sworn to and subscribed before me this 21 day of August, 2022.

/signed/
Notary Public

Sivanagaraju Yarramaneni, Notary Public
(Printed Name of Notary Public)

My Commission Expires: 17 Nov. 2024

